ABSTRACT

The invention provides immunoglobulin polypeptides comprising variant amino acids in CDRs of antibody variable domains. In one embodiment, the polypeptide is a variable domain of a monobody and has a variant CDRH3 region. These polypeptides provide a source of great sequence diversity that can be used as a source for identifying novel antigen binding polypeptides. The invention also provides these polypeptides as fusion polypeptides to heterologous polypeptides such as at least a portion of phage or viral coat proteins, tags and linkers. Libraries comprising a plurality of these polypeptides are also provided. In addition, methods of and compositions for generating and using these polypeptides and libraries are provided.